## SEQUENCE LISTING

<110> NELSON, DAVID R. 5 <120> A LIVE, AVIRULENT STRAIN OF V. ANGUILLARUM THAT PROTECTS FISH AGAINST INFECTION BY VIRULENT V. ANGUILLARUM <130> 5112 10 <140> <141> <160> 4 15 <170> PatentIn Ver. 2.1 <210> 1 <211> 3609 20 <212> DNA <213> V. Anguillarum <220> <223> "n" bases may be a, t, c, g, other or unknown <400> 1 gtcgacttat tgcattgatg gcgtacatgg tagtgccatc cttcgtttgc taacaagcgt 60 tgtataaaag cttggtcggt ttcatcaagt tgaacacaat actcatgatt tttcccactt 120 ccggaaaggg aaaagtgaaa atagcttttg agatcagcct gttctagcag cttttcaatg 180 30 atctttttcq tcqttacqtt ttqaaaaatc tqacqactqc gtttgtattg caacaaqcta 240 agtggatcca atatctctat ttgataataa aactgctgct tgtctttgct atatcctgtq 300 aattgcagag tgctacatat acctgaaaaa aaacgctttc cagaatctaa ttcgtaaqac 360 acacaaacaq ctttacctaq qtttttqqta tcqatctcca tgtttqccqc qatgqaaacq 420 qaaaactqac acccqccqqa tacqctttcc tctccqatta attqcqtqac aatataactt 480 [] []5 ttgctatctg aaagcttaat ggtgagggag cgggtttggt gctttaattc gttactgctc 540 atattcaatt aattcactat taaataaaca gttctaaaag gctgtttatt ggatgaatat 600 G tcgaaattat cacataataa ttgatgctat tattacttgc tgtattggta tcaactttca 660 ļΨ tgctctatac atgtaatata tttcgagtta gaccttaatt caaggtaatt tgtctattta 720 attattatct qaataatatq taatcqattq ctttqtqqtt atttttatqt ttqtttcatt 780 40 tttaatqacq qtqaqcttqt qcattcatat tttttatqat qacaacatct ttqatqaaqt 840 atttaagata ttgttaatgc atgaggggtt tgcgtgtatt ttttatatta aatcataata 900 aaatcaacaa tatatgttat tttgtgtctt tttatagtgt tcttttaaag aggtaggatg 960 acctaaaqqt cqcctagaaa tatqqcqtaa attqccattq ctataattca cctcaaaqat 1020 acactattgg caaattgaca aatatgtcac ttcgtatgaa acaatattag tagatgttgt 1080 45 ttttgctgca aaaataaaaa tttttctggt tgaaataact caaggcctct agcgttttcc 1140 tttatcttaa aatacaggaa atagcgattg aagttaattg acacttaagc aasdramgaa 1200 tagtcaacct aacagagcag gaacctatgc ctttgtcaaa gcatcaaatt gagcaacttt 1260 ctaaacctct gagtgatgat tcgatctgtg gcgtttatct taaactggaa aaaagtgctt 1320 ttcgcccatt acgtaatgaa tttaatgtcg cgcaaactgc gctgcgtaag ctaagtcaaa 1380 accctagtgc tgacgagaga gatgcgttac aagaggcatg tctaaataag tggaagattc 1440 50 ggtttgttgc tgctcaattc cttctcgata ccacattaga aagtgctgcg aatagccttg 1560 agtggttagc ggatttaagt gagaagcact gggatcacct caaccctgta ctaccagttg 1620 aaacgctcaa atctgatgat gataagggca aagaaagaga gcaagcagat gcgaaagtta 1680 55 aaqcattttt ccaactaqtc qqcqataqcq aqqaaaqctc qattctctat qcqccqqtqc 1740 tgcaactgcc cttagtcggg gaagtgacgt tttttgactt tcaaagtgca gagagaaaag 1800 qcqaaatcaq ccaactqaaa tctatqctta cgaccacggt ggcgcaagag cgtttcgcaa 1860

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  - Xaa Ile Glu Pro Leu 115